

Upgrading of the Simeiz-1873 SLR Station

Sergiy Filikov

Crimean Astrophysical Observatory, Shaina str., Simeiz, UKRAINE.

Voice: 38-0654-24-03-70; Fax: 38-0654-24-03-70; Email: filikov@simeiz.ylt.crimea.com.

*A. Dmitrotsa, O. Minin, D. Neyachenko, L. Shtirberg
Crimean Astrophysical Observatory, Simeiz, UKRAINE.*

S. Tatevian

Institute of Astronomy RAS, 48. Pyatnizkaya Str. 109017 Moscow, RUSSIA.

ABSTRACT

In 1999-2000 the performance of the SIMEIZ-1873 satellite laser station has been greatly improved due to valuable assistance of Michael Pearlman and Daniel Nugent and with the financial support of the CRDF grant UG1-332. A description of the system configuration is shown in Table 1. Now the station is still operating in semiautonomous ranging mode with night tracking, but an upgrading of the SLR software and an installation of the new laser generator are planned in the nearest future. In 2001 more than 550 satellite passes have been tracked with the improved precision. The SLR station is collocated with the permanent GPS receiver and the Crimean VLBI station is 1.3 km away.

Table 1. SIMEIZ-1873 SLR System Configuration.

Mount Configuration	AZ/EL
Laser Type	ND:YAG
Primary Wavelength	532 nm
Pulse Energy	30-80 mJ
Repetition Rate	1 Hz
Receiver Aperture Dia.	1m (70 cm)
Detector Type	PMT (H6533)
Time Counter	HP 5370B (20 ps precision)
Angular sensors	Farrand-Controls (0.4")